

*PTEROCERAS MONSOONIAE* (ORCHIDACEAE),  
A NEW SPECIES FROM INDIA

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ABSTRACT

A new species of the South East Asian Genus *Pteroceras* Hassk. is described, illustrated and compared to its closest relative *Pteroceras johorensis*.

RESUMEN

Se describe una nueva especie del género *Pteroceras* Hassk. del sureste de Asia, se ilustra y se compara con su pariente más próximo *Pteroceras johorensis*.

INTRODUCTION

*Pteroceras* Hassk. is reported to have 19 species, mostly inhabited in the warm humid regions of Southeast Asia, and is best represented in Borneo with 10 species (Pedersen 1993). From Peninsular India, only one species, *Pteroceras leopardinum* (Parish & Reichb. f.) Seidenf. & Smitin., is reported. During our recent explorations in the Parambikulam Wildlife Sanctuary of Kerala interesting specimens of *Pteroceras* were collected. The specimens were found to differ from the South Indian species. Following the monograph of the genus (Pedersen 1993) the specimens show similarities with the little known *Pteroceras johorensis* (Holttum) Holttum that seems to be endemic to Johor in Peninsular Malesia. However, they differ in the leaf form and size; texture, form and size of the peduncle, size of the bracts and floral parts; structure of labellum and pollinia (Table 1). Pedersen (1993) recognized four main types of inflorescences in the genus. Our species agrees with *Pteroceras asperatum* (Schltr.) P.F. Hunt, *P. hirsutum* (Hook. f.) Holttum, *P. johorensis* (Holttum) Holttum, *P. muriculatum* (Reichb. f.) P.F. Hunt, *P. philippinense* (Ames) Garay and *P. spathibrachiatum* (J.J. Smith) Garay by having a muricate or prickly (sub)terete rachis without any keel or wings. Drawings of our material were sent to Pedersen who supported our view that it should be described and illustrated as a new species.

***Pteroceras monsooniae*** Sasidharan & Sujanapal, sp. nov. (**Fig. 1**). TYPE: INDIA. KERALA. PALAKKAD DISTRICT: Parambikulam Wildlife Sanctuary, 10°32'226" N, 76°86'552" E, 1180m, 28 May 2000, P Sujanapal KFRI 30407 (HOLOTYPE: KFRI; ISOTYPES: BRIT, CALI, MH, TBGT)

*Pterocerati johorensi* similis in rhachide aculeata tereti et perianthio oblong-ovato acuto vel rotundato, sed folii apice latus facto bilobato, pedunculo crasso brevi prominente aculeato, floribus

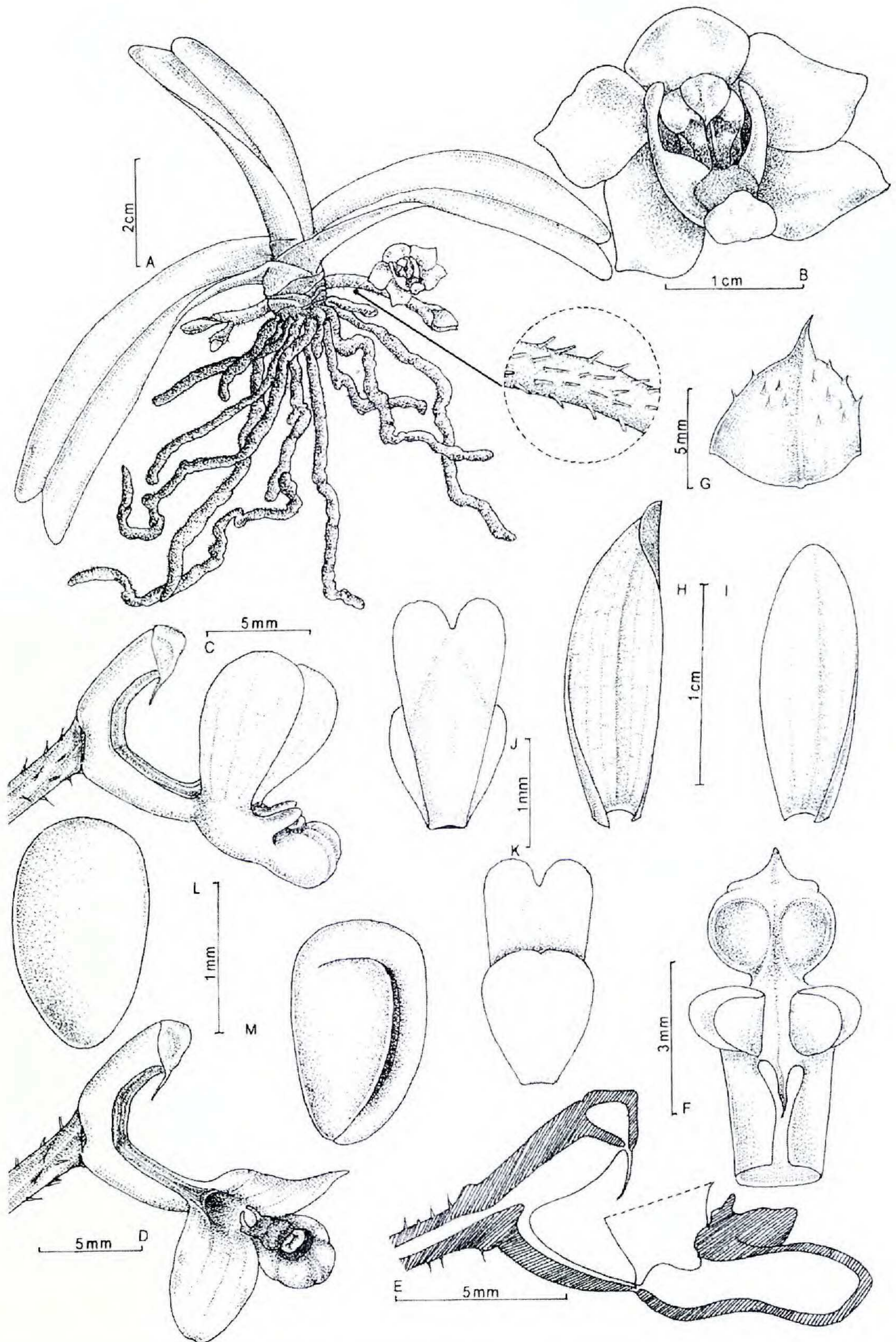
TABLE 1. Comparison of *Pteroceras monsooniae* with *P. johorensis* (Holttum) Holttum.

Character	<i>Pteroceras johorensis</i> <sup>1</sup>	<i>Pteroceras monsooniae</i>
Leaves	ca. 5 on a flowering shoot linear-lanceolate, 5–8 × 1–1.5 cm, apex narrowed, obtuse or unequally bilobed, lobes very small	ca. 4 on a flowering shoot linear or elliptic-lanceolate, to 4–8 × 1–2 cm, apex broad, unequally bilobed, lobes broad and rounded
Roots	0.6–1 mm diameter	4–6 mm diameter
Inflorescence	to 3 per plant Erect, 3.7–4.1 cm long	2–7 per plant at right angles to the stem, 1–3 cm long
Flowers	2–8, arranged towards the apex of the raceme peduncle 0.4–0.6 mm diameter	2–4, equidistantly arranged in the raceme peduncle 2–4 mm diameter
Bracts	ca. 1 × 1 mm, subtriangular, not embracing the peduncle base 6 mm broad hairy on abaxial side apex not spinulate	ca. 6 mm long, broadly ovate, embracing the peduncle, prickly on abaxial side apex spinulate
Floral parts	median sepal, 8.5–11 × 4.5–5 mm petals 8.3–10 × 4.6–5.2 mm spur without ridges anther ovate with an acute triangular apex, pollinia subspherical, 1–1.2 mm diameter	median sepal to 18 × 10 mm petals to 14 × 8 mm spur with two ridges Anther triangular with a caudate apex pollinia obovoid, 1.5–1.8 mm long, 1 mm broad

<sup>1</sup>Characters based on Pedersen's (1993) description. The description of *Pteroceras johorensis* is rather poor due to the rarity of this little known species which is known from two collections only.

aequidistantibus, bractea magna aculeata apice spinuloso, calcare bi-porcato, polliniis obovoideis rima L-forma differt.

Epiphytic herb, stem to 2 cm tall, erect, unbranched. Leaves 4, distichously alternate, 4–8 × 1–2 cm, sessile, articulate, linear to elliptic-lanceolate, slightly wider towards the apex, unequally bilobed, lobes rounded; leaf sheaths imbricate, glabrous, covering the internodes. Inflorescences racemous, from the axils of older leaf sheaths, 2–7, unbranched, at right angles to the stem, 1–3 cm long; peduncle terete, ca. 4 mm diameter, gray, densely covered with soft brown prickles; bracts ca. 6 mm long, persistent, broadly ovate, spinulose at apex, prickly on abaxial side; base 6 mm wide, more or less sheathing the peduncle; flowers 2–4, sessile, spirally alternating (one open at a time). Sepals and petals free, spreading, sparsely prickly on abaxial side, grayish-white; median sepal ca. 1.8 × 1 cm, laterals adnate to the column foot, elliptic-obovate, apex acute; petals ca. 1.4 × 0.8 cm, oblong-obovate, base rounded, glabrous or slightly muricate on abaxial side. Labellum to 6 mm long, side lobes 4 × 3 mm, embracing the column before anthesis and spreading (open) after anthesis, apical part widened, apex obliquely rounded, midlobe small, with a porrect spur. Spur saccate, ca. 3 mm across and 2-toothed at mouth, apex rounded with 2 dorsal ridges,



**Fig. 1.** *Pteroceras monsooniae* Sasidharan & Sujanapal. **A.** Habit; **B.** Flower; **C.** & **D.** Column with lip (dorsal and ventral view); **E.** Flower L.S. (sepals and petals removed); **F.** Column; **G.** Bract; **H.** Sepal; **I.** Petal; **J.** & **K.** Stipe with viscidium (dorsal and ventral view); **L.** & **M.** Pollinia.

lower ridge yellowish, ca. 2 mm; rostellum ca. 3 mm, deeply bifid 3 mm, clinandrium 3 mm diameter, apiculum 2 mm long. Anther terminal, triangular with a caudate apex, strongly incumbent, dehiscing ventrally, to form 2 flaps; pollinia 2, obovoid, 1.5–1.8 × 1 mm, deeply cleft, stipe ca. 2 mm long, narrowed towards the base, bilobed at apex, lobes rounded, viscidium obovate, to 1 mm long, broader than the stipe. Ovary ca. 1 cm, terete, twisted to the left, slightly 6-ribbed, sparsely echinate. Capsule ellipsoid, to 2.8 × 1.6 cm, 6-ribbed depressed at apex (Fig. 1).

*Note.*—The flower has a two-ridged spur with an yellowish neck (like the head of a honey bee) which attracts insects during anthesis. The flowers are ephemeral and withering after 8–10 hours. However, the floral parts continue to be attached to the ovary during the fruit development.

*Flowering and Fruiting.*—May–June, usually flowering with the onset of the southwest monsoon.

*Etymology.*—Specific epithet of the new taxon is based on the flowering season.

*Distribution.*—Known only from the type locality

*Habitat.*—This small monopodial epiphyte is growing ± 1100 m above sea level on trees like *Phyllanthus emblica* L. and *Syzygium cumini* (L.) Skeels along the ecotone area of grassland. Other common trees in the locality are *Cinnamomum sulphuratum* Nees, *Ficus tinctoria* Forst. f. ssp. *parasitica* (Koen. ex Willd.) Corner, *Xantolismomentosa* (Roxb.) Rafin. var. *elengioides* (DC.) Vajra., etc. The locality constitutes a continuation of the Coimbatore plateau of Deccan which is subjected to high velocity of wind and humidity. Therefore the trees are mostly stunted and clothed with dense moss growth.

PARATYPE: **INDIA. Kerala. Palakkad district:** Parambikulam Wildlife Sanctuary, 10°32'226" N, 76°86'552" E, 1180 m, 19 May 2001 *Sujanapal KFRI 30596* (KFRI).

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#### REFERENCE

PEDERSEN, HÆ. 1993. The genus *Pteroceras* (Orchidaceae) – a taxonomic revision. *Opera Bot.* 117:1–64. Copenhagen.